

## **Global navigation satellite systems**

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W. Lechner and S. Baumann

1. Explain the main idea of GPS, how the system works, how many satellite signals are necessary to achieve a position estimate in three dimensions (x, y, z)?
2. What is gained by using differential GPS? How does a differential GPS work? If you, on your own, should build a differential GPS system, how would you do it?
3. What sources of errors affect the position estimate of the GPS, and thus also the DGPS?
4. What does it mean that satellites are geo-stationary? Give some examples of systems that are using geo-stationary satellites.
5. Galileo is a European co-operation, why is this system developed? Why not simply use the existing GPS systems?
6. The SA (Selective Availability) signal, was in 2000 removed by the order of the American president. What does the SA signal do? Although, removed, the SA signal still leads to a problem for e.g. European industry, why?